

Claims

What is claimed is:

- 1 1. An interface between a preconcentrator and a piece of
2 baggage, said interface comprising:
 - 3 (a) a top securing member;
 - 4 (b) a bottom securing member connected to said top
5 securing member and forming a gap therebetween; and
 - 6 (c) a recess having a perimetrical shape that corresponds
7 to the perimetrical shape of the exterior of a
8 preconcentrator, said recess comprising a vent.
- 1 2. The interface of claim 1 further comprising two clamps,
2 wherein each of said clamps comprises a top lip connected
3 to said top securing member and a bottom lip connected to
4 said bottom securing member, thereby forming a gap
5 therebetween.
- 1 3. The interface of claim 2 wherein the two clamps are
2 diametrically opposed to one another.
- 1 4. The interface of claim 2 wherein the gap between said
2 bottom and top lips creates an opening.
- 1 5. The interface of claim 3 wherein each of said clamps
2 further comprises a lever connected to said top lip,
3 thereby allowing the opening to expand and contract as said
4 lever moves toward and away from the center of the
5 interface, respectively.
- 1 6. The interface of claim 1 further comprising at least one
2 securing hole within said recess.

- 1 7. The interface of claim 6 wherein said securing hole is
2 complementary to an electrode of the preconcentrator.
- 1 8. The interface of claim 1 further comprising a first locking
2 ring.
- 1 9. The interface of claim 8 further comprising a second
2 locking ring opposite said first locking ring.
- 1 10. An apparatus that serves as an interface between a
2 preconcentrator and a zipper within a piece of baggage,
3 wherein said zipper comprises two rows of teeth, said
4 apparatus comprising:
- 5 (a) means for receiving a preconcentrator;
- 6 (b) means for air to travel through said receiving means;
7 and
- 8 (c) means for gripping a portion of each row of teeth of a
9 zipper within a piece of baggage.
- 1 11. The apparatus of claim 10 further including means for
2 securing at least one post of said preconcentrator to said
3 apparatus.
- 1 12. The apparatus of claim 10 further comprising means for
2 securing a lock for said baggage to said apparatus.
- 1 13. The apparatus of claim 10 wherein said gripping means
2 comprises two clamps, wherein each of said clamps
3 comprises:
- 4 (i) a bottom lip;

5 (ii) a top lip creating a gap between said bottom
6 and top lips, wherein said gap comprises an
7 opening; and

8 (iii) means for enlarging said opening.

1 14. The interface of claim 13 wherein the two clamps are
2 diametrically opposed to one another.

1 15. An interface between a preconcentrator and a piece of
2 baggage, said interface comprising:

3 (a) a recess having a perimetrical shape that corresponds
4 to the perimetrical shape of the exterior of a
5 preconcentrator, said recess comprising a vent; and

6 (b) two clamps, wherein each of said clamps comprises a
7 bottom lip and a top lip for gripping a portion of the
8 baggage.

1 16. The interface of claim 15 wherein the two clamps are
2 diametrically opposed to one another.

1 17. The interface of claim 15 wherein the gap between said
2 bottom and top lips creates an opening.

1 18. The interface of claim 15 wherein each of said clamps
2 further comprises a lever connected to said top lip,
3 thereby allowing the opening to expand and contract as said
4 lever moves toward and away from the center of the
5 interface, respectively.

1 19. The interface of claim 15 further comprising at least one
2 securing hole within said recess.

1 20. The interface of claim 19 wherein said securing hole is
2 complementary to an electrode of the preconcentrator.

1 21. The interface of claim 15 further comprising a first
2 locking ring.

1 22. The interface of claim 21 further comprising a second
2 locking ring opposite said first locking ring.